



COLORADO

Division of Fire Prevention & Control

Department of Public Safety

FIRE & LIFE SAFETY

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Section Chief Brunette's Message: For Auld Lange Syne

Many of you may have used this phrase as you rang in the new year with close friends and loved ones. I can't think of a better sentiment to end 2020 as we look forward to a prosperous and bright 2021. When translated into English, "Old Long Since," this Scots phrase fails, at first, to evoke much feeling or meaning; however, when you contextualize it into the long-past Scottish oral tradition and later into the famous poem by Robert Burns, one can begin to grasp its true significance. If we take it a step further and apply its meaning to the series of events that occurred over the past year, its significance further blossoms.

When a word or phrase is translated from one language to another, quite often the meaning is lost; therefore, it is important that with any translation, interpretation is also applied. The old Scots phrase is better interpreted to mean "days or times gone by," so when we use the phrase at the new year, we're actually toasting the days that have passed and the life that we've lived that year. For, we aren't who we are, and we haven't arrived where we're at, without having made the journey each one of us has made. Each new year may bring with it new challenges, but it is just as likely to bring with it new panaceas. The truth is, we face new challenges, new opportunities for growth, new ideas to implement, new hurdles to overcome, and new paths to explore each and every day. In the end, it isn't these that matter, but our reaction to them.

And so, we toast, state, or sing "For Auld Lang Syne" to celebrate the times that we have lived in and through, making us all the more who we are, individually and as a community, looking forward to the new days, weeks, months, and years to come. Come what may, as long as we continue to embrace life for the adventure that it is, there is no challenge, no hurdle, or no unexplored path that can stop us from being the best version of who we are meant to be! I am looking forward to experiencing with you all an exciting and rich 2021!

Happy New Year, my friends, and here's to auld lang syne!

Inspections in Health Care Facilities and Schools in the Time of COVID-19

By: Fire Prevention Branch Chief Rob Sontag

What are the expectations for Fire and Life Safety Inspections during the Public Health Emergency?

Over the past few months as schools have gradually been reintegrating and retreating from “in-person learning” in the classroom DFPC has received a lot of questions from State certified fire inspectors about expectations for regular “maintenance” inspections in schools and in health facilities.

As you know the general expectation is that local fire authorities having jurisdiction (AHJ) who employ a DFPC Certified Fire Inspector will inspect the schools in their jurisdiction at least once a year. Further, they may be asked by a non-Medicare or Medicaid health facility in their jurisdiction to conduct a fire inspection. All this is assuming we aren't in the middle of the largest public health emergency in over a Century.

Schools and Casinos... DFPC has implemented guidance to our inspectors that we will not generally enter schools or casinos for maintenance inspections that are located in Counties identified as Orange, Red, or Purple according to the Colorado Department of Public Health & Environment's (CDPHE) **Covid-19-Dial-Dashboard located here.**

Since it seems unlikely we will see a complete return to normal before the end of the school year we will leave it to the local fire AHJ who employ a DFPC Certified Fire Inspectors to determine the right level of ongoing review is appropriate given the current status of COVID-19 in your community and the level of activation of your local schools and casinos.

Health Facilities...DFPC inspectors have received a full set of Medical Personal Protective Equipment (PPE) and specific training from CDPHE to allow them to conduct federally mandated fire and life safety inspections in certain high risk health care facilities. Even with this training and equipment our inspectors will not generally be going into rooms or wings that have been identified as currently containing COVID-19 positive residents

Other than these special circumstances above where the Feds have specifically tasked us with a inspection we will be following the same guidance as we have for schools in how we assign and conduct our State Level Certificate of Compliance (COC) inspections of state licensed health facilities.

During the PHE If a local fire AHJ who employs a DFPC Certified Fire Inspector are asked by a Health Facility to conduct a fire code inspection because the health facility is trying to renew their COC with DFPC, we would simply ask that the AHJ provide a copy of their report for the last fire inspection for that facility they conducted within the past three years (hopefully showing no outstanding deficiencies). If the last inspection was within the past year we will issue a 3 year COC for the facility provided all outstanding fire code issues have been resolved. If the last inspection was greater than a year ago DFPC will issue a Temporary COC to allow the facility some time to schedule an inspection with you after the PHE.

As Always, DFPC is Ready to Help: Always keep in mind we are glad to help explore best practices if you need help or guidance.If you have any general questions feel free to contact Robert.Sontag@state.co.us.

For questions specific to Schools or Casinos maintenance inspections contact Bryan.Kendall@state.co.us

For Health Facilities maintenance inspections contact Bryan.Adams@state.co.us

For plan review and construction questions reach out to Shane.Kakavas@state.co.us.

Safety Assessment Program – East Troublesome Fire Deployment

By: Building Codes Inspector and SAP Team Coordinator David Chadwell

The State of Colorado continuously prepares for any disaster that may occur in or near our communities, and the Division of Fire Prevention & Control (DFPC) is no exception. The Colorado Department of Public Safety, including DFPC, is actively involved in many aspects of disaster preparedness, response, mitigation and recovery.

From a local building code official's perspective, there is a large gap between response and recovery. Recovery efforts do not typically move quickly after large-scale disasters, leaving local building departments overwhelmed with the task of trying to evaluate structures for safety issues per their jurisdictional authority.

The Colorado Division of Fire Prevention & Control recently created a SAP (Safety Assessment Program) Team with trained staff members to offer assistance and provide direction to local building departments when the scope and magnitude of a disaster exceeds the building department staff's ability to perform the necessary evaluations in a timely manner.



SAP Team Evaluators utilize a system, based upon the ideology of the Safety Assessment Program created by the California Office of Emergency Services, of tagging evaluated buildings with green, yellow or red placards. Green is for structures evaluated wherein no safety concerns are identified; Yellow is for structures with varying degrees of restrictions; Red is to indicate a structure deemed unsafe, due to a significant potential safety concern.

On October 14, 2020, the East Troublesome Fire – which ultimately became the second largest wildland fire in Colorado's history – was first reported Northeast of Kremmling, in Grand County, Colo. on the Arapaho National Forest. Fire spread increased dramatically on October 21-22, with a historic increase of 87,093 acres in just 24 hours. The size of the fire exploded from 18,550 to 187,964 acres and spread eastward into Rocky Mountain National Park, crossing the Continental Divide and reaching the western edge of Estes Park on Oct. 23.

During the fire's ferocious 24-hour run, the area along and North of US Highway 40, East of Granby extending eastward to Grand Lake and Estes Park had over 7,000 structures threatened, and a population of over 35,000 placed under mandatory evacuation. A preliminary estimate indicated 366 residences and 214 outbuildings and commercial structures damaged or destroyed. The fire was fully contained on Nov. 30, 2020 with a final total acreage of 193,812.

Like most building departments, the Grand County Building Division did not have enough personnel to evaluate nearly half of their jurisdictional structures for immediate safety concerns prior to re-entry by the public. DFPC deployed a team of five (1-Mission Coordinator; and two 2-man teams of Evaluators) to assist with the daunting task. The deployment of DFPC's SAP Team to the East Troublesome Fire was the first activation of the program on a wildfire event.

Over the course of two long days, the teams performed evaluations on 1,164 structures and were able to provide valuable information to the local building official about the structures within his jurisdiction. The team discovered 20 structures that appeared to be habitable but with safety concerns that required additional evaluation and input from the building official. Locating those structures quickly assured the safety of the public, and helped make the decision to allow the public to reoccupy those homes much easier for local authorities.

New Codes Are Coming!

By: Professional Development Educator, Kyle Parag

With 2021 comes a new code cycle from the International Code Council. In an effort to remain relevant with the latest technologies and provide the highest safety possible throughout our state, the Division of Fire Prevention & Control is anticipating transitioning to the new edition of the codes for the programs we administer. ICC has been slowly releasing the newest editions over the past few months and we have been diligently working to make the transition smooth for all parties. The transition from the currently adopted 2015 editions to the 2021 editions and referenced standards will be rather significant to most of the programs. The adoption of NFPA 101, Life Safety Code, and NFPA 99, Health Care Facilities, will not be affected by this transition and the currently adopted editions of these texts will remain in effect.

The Division is preparing to adopt the new editions of the ICC codes on July 1, 2021, details for the upcoming adoption process will follow in the coming months. Projects submitted for permit before the adoption date will remain in effect through the work authorized by the permit. The Division has numerous agencies and personnel that work with us on projects relating to the programs affected, and all parties are expected to follow the same timeline with the transition.

We are working hard to locate key changes that have a large impact on our programs, and we will be relaying that information as efficiently as possible in the coming months.

For more information, please click to review [8 CCR 1507-101](#). We will be posting more information about the transition on our website in the

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Fire Investigations Transitions to CSP Radio Dispatch

By: Lead Fire Investigator Dawn Tollis

Over the last quarter, Sherry Snyder has been working diligently with the Colorado State Patrol to implement a radio dispatch program for the Fire Investigations Unit. We are very happy to announce that the process officially went live in December, and has already shown great results!

The new process allows for us to have constant radio communication with the Pueblo Dispatch Center, further advancing our efforts to provide additional safety measures to both internal and external stakeholders.

To request assistance from the Investigations Unit, Pueblo Dispatch can be reached at (719) 544-2424.

Please have some basic information ready to provide, including requesting agency, contact name, contact phone number, and type of fire (wildland, structure, or vehicle).

The Investigations Team will be dispatched accordingly and respond to the requesting agency to coordinate efforts. We are very appreciative for the collaboration with CIAC, and continue to work with that team to disseminate information internally. A huge thanks to everyone that was involved with this process, we are looking forward to this new partnership!

Dust Collection Systems Code Compliance

By: Building Codes Plan Review Unit Chief Jon Weir

Dust collection systems are required for woodshops and some other programs in educational occupancies. The purpose of this document is to help provide consistent guidance to the permit applicant prior to the Division of Fire Prevention and Control (DFPC) Building Code Branch (BCB) review. Compliance in the 2015 International Mechanical Code (IMC) and 2015 International Fire Code (IFC) provisions outlined below must be shown either on the sealed mechanical construction documents or on the sealed shop system design drawings.

2015 INTERNATIONAL MECHANICAL CODE PROVISIONS

IMC 2015 Definitions:

Appliance - “A device or apparatus that is manufactured and designed to utilize energy and for which this Code provides specific requirements”.

Equipment - “All piping, ducts, vents, control devices and other components of systems other than appliances which are permanently installed and integrated to provide control of environmental conditions for buildings. This definition shall also include other systems specifically regulated in this code”.

IMC 2015 Specific Requirements:

Labeling and Testing = Labeling and testing requirements for equipment and appliances are found in Sections 301.8, 301.9 and other IMC and IFC Sections for related code requirements such as electrical, fire sprinklers, etc.

Ventilation Outdoor Air = Specific woodshop ventilation air requirements are found in Section 403.2 and Table 403.3.1.1 for Wood/Metal Shops.

Exhaust System = An exhaust system is required per Sections 502.1 and 502.1.4. Section 502.1.4 also directs you to Section 510 for Hazardous Exhaust Systems.

IMC 2015 Section 510 Hazardous Exhaust Systems:

Section 510 addresses Hazardous Exhaust Systems. Section 510.2 provides the specific operating conditions where these systems are required. Combustible dust falls within this Section.

Section 510.2.1 addresses woodworking facilities and lumber yards. This Section requires an approved dust collection, exhaust system and explosion-control system be installed per this Section and the IFC.

Section 510.3 requires the design and operation of the system shall be such that the flammable contaminants are diluted in non-contaminated air to maintain concentrations in the exhaust flow of the designed system to maintain the contaminants below 25% of the contaminants lower flammability limit. (Engineer must verify)

Sections 510.4 and 510.5 addresses the independent exhaust system design requirement and includes any shaft enclosures design.

Section 510.7.1, 510.7.2 and 510.7.3 addresses penetration of fire-resistive assemblies whether a shaft, wall or floor.

Section 510.7.4 prohibits hazardous exhaust system ducts from penetrating a firewall assembly. There are NO exceptions to this requirement.

Section 510.8 requires that hazardous exhaust system ducts be protected with a fire suppression system unless 1 of the 4 exceptions is met. Exception #3 exempts ductwork with a cross-sectional diameter of 10 inches or less from fire suppression protection. This does not exempt these systems from explosion-control or any other requirements for these systems.

Section 510.9 provides the specific duct construction requirements, to include duct joints and clearances to combustibles.

Section 510.9.3 requires the systems exhausting potentially explosive mixtures to be protected with an approved explosion relief system or by an approved explosion prevention device designed and installed per NFPA 69. The design criteria are also found within this Section.

Section 510.10 provides the support requirements for these duct systems

IMC 2015 Section 511 Dust, Stock and Refuse Conveying Systems:

Section 511.1 mandates that any dust, stock and refuse conveying systems comply with Sections 510 and 511.1.1 through 511.2.

Section 511.1.1 requires that the collectors, separators and associated supports be of non-combustible construction and that these systems be located on the exterior of the building. Additionally, there are distance requirements from combustible construction and unprotected openings (10') as well as metal vent pipe termination (30' above roof). There are two exceptions for indoor use of collectors, but they both have the same end result.

Exception #1 allows collectors, such as “point of use” to be installed indoors provided they are installed per the IFC and NFPA 70 requirements.

Per the IMC Commentary, this exception is necessary to avoid conflict with the IFC and to apply the appropriate explosion protection standards (found in the IFC) for specific types of combustible dust-producing operations. (There is no guidance on what a “point of use” collector is or what listing requirements they may have. The Code still requires these collectors to be labeled and listed)

Exception #2 is specific to combustible dust collectors using the same reasoning as used for Exception #1.

If the dust collection system is not approved for indoor use, the remainder of IMC Section 511.1 is applicable.

Section 511.1.3 requires the exhaust system to discharge to the outside of the building one of two ways. This Section also gives prescriptive requirements for exhaust system discharge that will be recirculated.

Section 511.1.4 requires the outlet of an open-air exhaust terminal to be protected with an approved metal or other non-combustible screen to prevent the entry of sparks.

Section 511.1.5 requires explosion relief vents. NFPA 68 provides guidance for the design of explosion-venting systems

Fire Safe Colorado forms the FSC Steering Committee

By: Professional Development Unit Chief and Fire Safe Colorado Program Lead Chuck Altvater

DFPC's Community Risk Reduction (CRR) program, Fire Safe Colorado, has recently established the Fire Safe Colorado Steering Committee to help guide how the program will operate for the next 3-5 years. The Steering Committee is comprised of the "FSC Champion" from each of the 14 FSC Regions, with Chris Brunette and Chuck Altvater from DFPC.

Other interested parties are welcome to attend meetings and give voice to their ideas and opinions, with decisions being made by the Steering committee members. At the first Steering Committee Meeting, the group worked on refining the Fire Safe Colorado Mission, Vision, and Values Statements, to better identify the program's course going forward. As part of the process, the Steering Committee listened to a talk by Josh Fulbright of Fire Safe South Carolina to learn more about how that program operates in South Carolina; FSC is largely based upon that model.

FSC is the state-wide CRR outreach program from DFPC, and works to educate local jurisdictions about CRR, and to facilitate the sharing of data, ideas, and programs between all public safety agencies in Colorado, including: Fire Service agencies, EMS and Healthcare agencies, Sheriff and Police Departments, School Districts, and more.

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The DFPC Professional Development Unit is here for local Fire Agencies

By: Professional Development Unit Chief Chuck Altvater

When a local Fire agency doesn't have the resources to serve as the Fire Official for new construction, the local agency will refer the project to DFPC for plan review and permitting of the project, by law all school construction in jurisdictions that cannot act as the Fire Code Official will be reviewed and permitted by DFPC. When a project is permitted by DFPC under the Fire Code, the Plans Examiners and Inspectors of the Fire and Life Safety Section will approve and inspect all of the items that require a construction permit as listed in Section 105 of the International Fire Code.

There are some items which DFPC cannot adequately evaluate and approve, and those items are reserved for the local Fire Chief in Section 501.3 of the Fire Code. These items are: Construction documents for fire apparatus access, Location of Fire Lanes, security gates across fire apparatus roads, and construction documents and hydraulic calculations for hydrant systems. That comes down to TWO things: Fire Department Access, and Water supply for firefighting.

The Fire and Life ' Professional Development Unit is here to assist local fire jurisdictions with these items, so the local fire jurisdiction can have the input it needs to so it has the required access, and the water it needs to fight a fire in the structure, while receiving advice from DFPC Fire and Building Inspectors.

For more information or if your jurisdiction is need of assistance please contact us at 303.239.4100.

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